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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,206	02/25/2002	Makoto Shihoh	03500.016214	2849

5514 7590 05/21/2003

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EXAMINER

VO, ANH T N

ART UNIT	PAPER NUMBER
2861	

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
10/081,206

Applicant(s)

MAKOTO ET AL.

Examiner

Anh T. N. Vo

Art Unit

2861



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on _____

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

4) Claim(s) 1 and 2 is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1 and 2 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some* c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. _____
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) The translation of the foreign language provisional application has been received.

15) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

4) Interview Summary (PTO-413) Paper No(s). _____
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____

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DETAILED ACTION

Oath/Declaration

The declaration filed 17 May 2002 is acceptable.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

CLAIM REJECTIONS

Claim Rejections - 35 USC § 112

Claims 1-2 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Appropriate correction or clarification is required.

In claim1, it is not understood what the "difference of water head" is and how the recitation "the direction of gravity out of two sides having a largest area" is read on the preferred embodiment. Insofar as understood, no such two sides having a largest area.

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The remaining claim is dependent from the above claim and therefore is also considered indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior arts are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 are rejected under 35 USC 103 (a) as being unpatentable over Yamazaki et al. (JP. Pat. 59192573A) in view of Kaneko et al. (US Pat. 5,592,200).

Yamazaki et al. disclose in Figures 3-4 an ink cartridge for an ink jet printer comprising:

- a liquid bag (1) for containing liquid to be supplied to a liquid ejection head (not shown);
- said liquid bag (1) being so arranged as to make a side of said liquid bag facing a direction opposite to the direction of gravity out of two sides (11) having a largest area to be rigidly held at least partly and the other side to be freely movable;
- said liquid bag (1) being provided with a means (26, 27, 28, 28') for detecting an amount of liquid remaining in said liquid bag (1) by a position of the other side facing the direction of gravity and adapted to move according to the amount of liquid contained in said liquid bag (1);
- wherein said liquid bag (1) is rigidly secured in an area between 20% and 60% of the area that can be used for containing liquid.

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However, Yamazaki et al. do not disclose an ink cartridge (2) having a liquid bag adapted to generate negative pressure in the liquid ejection head by a difference of water head between the liquid ejection head (1) and the liquid bag (2).

Nevertheless, Kaneko discloses in Figure 1 an ink jet apparatus comprising an ink cartridge (2) having a liquid bag for containing liquid (2a) to be supplied to a liquid ejection head (1) and adapted to generate negative pressure in the liquid ejection head by a difference of water head between the liquid ejection head (1) and the liquid bag (2).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teaching of Kaneko et al. into the Yamazaki et al. ink jet printer for the purpose of providing the stable negative pressure.

Citation of Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art references (US Pat. 6,012,795, US Pat. 6,059,405, JP Pat. 60-090767A) cited in the PTO 892 form show a detector or a sensor which is deemed to be relevant to the present invention. These references should be reviewed.

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo whose telephone number is (703) 305-8194. The examiner can normally be reached on Tuesday to Friday from 8:00 A.M. to 6:00 P.M. The fax number of this Group 2800 is (703) 305-3431 or 305-3432.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308- 0956.



ANH T.N. VO
PRIMARY EXAMINER

May 13, 2003